

Internet Appendix

For

How Does Health Insurance Affect Firm Employment and Performance? Evidence from Obamacare

Heitor Almeida, Ruidi Huang, Ping Liu, Yuhai Xuan

Table IA1

The effect of the PPACA on foreign employment

This table reports OLS regression results for firms' foreign employment around the passage of the PPACA. The dependent variable is the ratio of foreign employees to total employees. All the variables are defined in Appendix A. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Variables	Foreign/total	
	(1)	(2)
After	-0.200 (0.169)	-0.148 (0.202)
Pre-coverage ratio x After	-0.013 (0.041)	
Pre-labor dependency x After		-0.475 (0.728)
Log (employment)	0.057 (0.074)	0.056 (0.074)
Size	0.116** (0.056)	0.116** (0.055)
Q	0.018* (0.010)	0.018* (0.010)
Leverage	-0.004 (0.075)	-0.004 (0.075)
Tangibility	-0.238 (0.174)	-0.235 (0.174)
Cash holdings	0.016 (0.096)	0.010 (0.096)
Cash flow	0.209* (0.125)	0.212* (0.124)
Foreign income	-0.238 (0.527)	-0.218 (0.527)
Firm FE	Y	Y
Industry x year FE	Y	Y
Controls x After	Y	Y
Prior trends control	Y	Y
Observations	14,764	14,764
Adjusted R-squared	0.747	0.747

Table IA.2
Parallel trends

This table reports regression results of the differences in changes in the outcome variables across different time horizons prior to the passage of Obamacare on the continuous treatment variables. Columns 1 to 3 are based on the pre-coverage ratio as the treatment variable, and columns 4 to 6 are based on pre-labor dependency as the treatment variable. All the variables are defined in Appendix A. Standard errors are in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Time horizon	Pre-coverage ratio			Pre-labor dependency		
	Log (covered) (1)	Covered/ total (2)	Non- covered/total (3)	Log (covered) (4)	Covered/ total (5)	Non- covered/total (6)
2009-2008	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.233 (0.289)	-0.057 (0.232)	0.272 (0.317)
2008-2007	-0.005 (0.004)	-0.003 (0.002)	0.002 (0.002)	-0.195 (0.271)	0.307 (0.393)	0.727 (0.473)
2007-2006	0.002 (0.001)	0.001 (0.002)	0.000 (0.001)	-0.300 (0.322)	0.047 (0.347)	0.794 (0.550)
2006-2005	0.001 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.241 (0.346)	0.506 (0.364)	-0.092 (0.383)
2005-2004	0.001 (0.001)	-0.000 (0.000)	-0.000 (0.000)	0.163 (0.298)	0.135 (0.253)	-0.315 (0.246)
2009-2007	-0.003 (0.003)	-0.004 (0.004)	0.002 (0.002)	0.292 (0.368)	-0.239 (0.344)	0.698 (0.544)
2009-2006	-0.000 (0.002)	-0.004 (0.003)	0.002 (0.002)	-0.078 (0.413)	-0.271 (0.434)	0.813 (0.698)
2009-2005	-0.008 (0.012)	-0.017 (0.018)	0.003 (0.011)	-0.588 (0.567)	-0.043 (0.531)	1.103 (0.737)
2009-2004	-0.003 (0.006)	-0.009 (0.012)	-0.006 (0.007)	-0.393 (0.604)	-0.361 (0.661)	1.138 (0.983)

Table IA.3

Placebo tests

This table reports OLS regression results for the placebo tests. We examine the key outcome variables using the 2001–2007 data. The placebo event month is March 2004. The dependent variable in Columns 1 and 4, log (covered), is the natural logarithm of number of total employees covered. The dependent variable in Columns 2 and 5, covered/total, is covered total employees divided by total employees. The dependent variable in Columns 3 and 6, non-covered/total, is the ratio of domestic non-covered employees to total employees. All the variables are defined in Appendix A. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Variables	Log (covered) (1)	Covered/total (2)	Non- covered/total (3)	Log (covered) (4)	Covered/total (5)	Non- covered/total (6)
Pre-coverage ratio x After	-0.035 (0.022)	0.647 (0.583)	-0.841 (0.534)			
Pre-labor dependency x After				-0.311 (0.291)	-0.667 (0.802)	-0.582 (0.697)
Controls	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Industry x year FE	Y	Y	Y	Y	Y	Y
Controls x After	Y	Y	Y	Y	Y	Y
Prior trends control	Y	Y	Y	Y	Y	Y
Observations	8,427	8,427	8,427	8,427	8,427	8,427
Adjusted R-squared	0.933	0.561	0.404	0.933	0.806	0.803

Table IA.4

Matching estimator: pre-coverage ratio

This table reports the estimation results using the matching estimator. We sort firms into the treated group if the continuous treatment variable, pre-coverage ratio, is ranked in the top 50% and into the nontreated group if the continuous treatment variable is in the bottom 50%. We match treated firms to control firms based on log number of employees, firm size, Q , leverage, tangibility, cash holding, cash flow, foreign income, and industry. Panel A reports the mean and standard deviation (in parentheses) of the matching variables among the treated, non-treated, and control groups. Panel B reports the estimation results for the average treatment effect on the treated (ATT) for the main outcome variables: log (covered), covered/total, and non-covered/total. Robust standard errors clustered by firm are in parentheses. All the variables are defined in Appendix A. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Panel A: Matched samples			
	Treated	Non-treated	Control	T-test p-value
Log (employment)	7.782 (1.518)	7.708 (1.823)	7.808 (1.458)	0.885
Size	6.397 (1.611)	6.308 (1.817)	6.350 (1.570)	0.812
Q	1.963 (0.969)	2.597 (2.085)	1.921 (0.961)	0.720
Leverage	0.179 (0.153)	0.243 (0.268)	0.189 (0.156)	0.625
Tangibility	0.182 (0.134)	0.258 (0.243)	0.180 (0.132)	0.897
Cash holdings	0.178 (0.191)	0.248 (0.267)	0.177 (0.179)	0.966
Cash flow	0.081 (0.055)	0.064 (0.159)	0.080 (0.056)	0.960
Foreign income	0.010 (0.016)	0.013 (0.029)	0.010 (0.016)	0.690

	Panel B: ATT estimator
ATT: Log (covered)	-0.158* (0.091)
ATT: Covered/total	-0.267*** (0.060)
ATT: Non-covered/total	0.222* (0.124)

Table IA.5

Matching estimator: pre-labor dependency

This table reports the estimation results using the matching estimator. We sort firms into the treated group if the continuous treatment variable, pre-labor dependency, is ranked in the top 50% and into the nontreated group if the continuous treatment variable is in the bottom 50%. We match treated firms to control firms based on log number of employees, firm size, Q , leverage, tangibility, cash holding, cash flow, foreign income, and industry. Panel A reports the mean and standard deviation (in parentheses) of the matching variables among the treated, non-treated, and control groups. Panel B reports the estimation results for the average treatment effect on the treated (ATT) for the main outcome variables: log (covered), covered/total, and non-covered/total. Robust standard errors clustered by firm are in parentheses. All the variables are defined in Appendix A. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Panel A: Matched samples			
	Treated	Non-treated	Control	T-test p-value
Log (employment)	7.457 (1.003)	7.759 (1.845)	7.739 (1.102)	0.230
Size	6.154 (1.260)	6.356 (1.850)	6.164 (1.472)	0.974
Q	2.004 (1.377)	2.555 (2.046)	2.251 (1.548)	0.446
Leverage	0.193 (0.191)	0.242 (0.265)	0.192 (0.188)	0.978
Tangibility	0.169 (0.150)	0.259 (0.243)	0.175 (0.140)	0.876
Cash holdings	0.194 (0.197)	0.246 (0.267)	0.188 (0.186)	0.888
Cash flow	0.083 (0.071)	0.064 (0.157)	0.095 (0.065)	0.405
Foreign income	0.007 (0.014)	0.013 (0.029)	0.007 (0.013)	0.806
Panel B: ATT estimator				
ATT: Log (covered)		-0.286** (0.137)		
ATT: Covered/total		-0.110* (0.065)		
ATT: Non-covered/total		0.313** (0.151)		

Table IA.6

The effect of the PPACA on health insurance coverage: alternative controls

This table reports OLS regression results for firms' employee health insurance coverage around the passage of the PPACA using control variables lagged by one year. The dependent variable in Columns 1 and 4, log (covered), is the natural logarithm of the number of total employees covered. The dependent variable in Columns 2 and 5, covered/total, is covered total employees divided by total employees. The dependent variable in Columns 3 and 6, non-covered/total, is the ratio of domestic non-covered employees to total employees. All the variables are defined in Appendix A. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Variables	Log (covered) (1)	Covered/total (2)	Non-covered/total (3)	Log (covered) (4)	Covered/total (5)	Non-covered/total (6)
After	0.427*** (0.137)	0.427*** (0.083)	0.282* (0.148)	0.166 (0.159)	0.087 (0.098)	0.401** (0.181)
Pre-coverage ratio x After	-0.264*** (0.035)	-0.359*** (0.035)	0.251*** (0.050)			
Pre-labor dependency x After				-0.854** (0.406)	-1.258*** (0.482)	1.622** (0.774)
Log (employment)	0.411*** (0.036)	-0.190*** (0.035)	-0.302*** (0.054)	0.392*** (0.037)	-0.213*** (0.040)	-0.294*** (0.052)
Size	0.178*** (0.032)	0.071*** (0.027)	0.020 (0.041)	0.205*** (0.032)	0.106*** (0.031)	-0.002 (0.041)
Q	0.004** (0.001)	-0.002* (0.001)	0.001 (0.002)	0.004*** (0.001)	-0.002 (0.001)	0.000 (0.002)
Leverage	0.051** (0.020)	-0.035** (0.014)	0.022 (0.020)	0.055*** (0.021)	-0.030* (0.015)	0.015 (0.021)
Tangibility	0.052 (0.099)	0.002 (0.061)	0.095 (0.100)	0.056 (0.099)	0.008 (0.067)	0.091 (0.100)
Cash holdings	0.093** (0.043)	-0.022 (0.036)	-0.028 (0.055)	0.077* (0.042)	-0.045 (0.040)	0.003 (0.058)
Cash flow	0.033 (0.043)	-0.085** (0.035)	0.047 (0.044)	0.044 (0.041)	-0.070** (0.035)	0.030 (0.045)
Foreign income	0.211 (0.248)	0.096 (0.144)	0.478** (0.242)	0.210 (0.252)	0.094 (0.151)	0.473* (0.252)
Firm FE	Y	Y	Y	Y	Y	Y
Industry x year FE	Y	Y	Y	Y	Y	Y
Controls x After	Y	Y	Y	Y	Y	Y
Prior trends control	Y	Y	Y	Y	Y	Y
Observations	14,295	14,295	14,295	14,295	14,295	14,295
Adjusted R-squared	0.903	0.711	0.716	0.901	0.690	0.711

Table IA.7

The effect of the PPACA on health insurance coverage: industry wage

This table reports OLS regression results for firms' employee health insurance coverage around the passage of the PPACA. The dependent variable in Column 1, log (covered), is the natural logarithm of the number of total employees covered. The dependent variable in Column 2, covered/total, is covered total employees divided by total employees. The dependent variable in Column 3, non-covered/total, is the ratio of domestic non-covered employees to total employees. Low-wage industry is a dummy variable that indicates whether the average wage in a firm's 4-digit NAICS industry is below the sample median industry wage. All the variables are defined in Appendix A. Robust standard errors clustered by firm are in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Variables	Log (covered) (1)	Covered/total (2)	Non-covered/total (3)
After	0.136 (0.160)	-0.266*** (0.102)	0.306* (0.172)
Low-wage industry x After	-0.182** (0.078)	-0.089** (0.044)	0.156** (0.075)
Log (employment)	0.330*** (0.068)	-0.065 (0.045)	-0.071 (0.072)
Size	0.206*** (0.059)	-0.004 (0.042)	-0.081 (0.060)
Q	0.005 (0.010)	-0.018** (0.009)	-0.009 (0.013)
Leverage	0.083 (0.073)	-0.017 (0.064)	0.010 (0.081)
Tangibility	0.063 (0.177)	-0.119 (0.138)	0.275 (0.204)
Cash holdings	0.172** (0.076)	0.084 (0.070)	-0.093 (0.107)
Cash flow	0.141 (0.104)	-0.170* (0.099)	-0.097 (0.143)
Foreign income	-0.254 (0.556)	-0.169 (0.431)	0.467 (0.607)
Firm FE	Y	Y	Y
Industry x year FE	Y	Y	Y
Controls x After	Y	Y	Y
Prior trends control	Y	Y	Y
Observations	14,347	14,347	14,347
Adjusted R-squared	0.892	0.695	0.702